

# Teaching NeuroImages: The Charcot shoulder

Chiari malformation with syringomyelia associated with arthropathy

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**Figure 1** Shoulder radiography shows humeral head destruction (arrow)

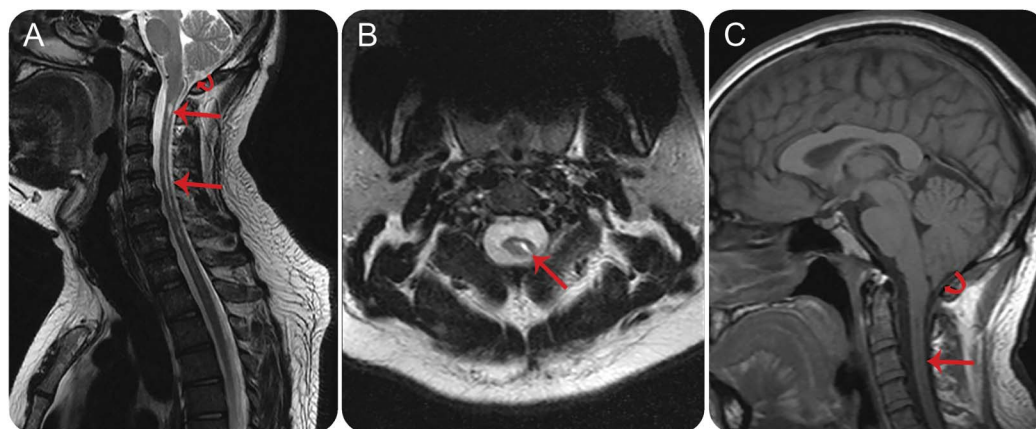


A 39-year-old man presented with 1-year history of shoulder pain, swelling, and limitation of movement. There was a 20-year history of left shoulder and arm numbness. Examination showed decreased vibratory sensitivity on left shoulder, glenohumeral instability, and dislocation. Radiography showed humeral head destruction (figure 1); a spine MRI showed tonsillar

herniation and cervical syringomyelia (figure 2). Arthropathy related to syringomyelia was diagnosed.

Chiari type 1 malformation may be associated to syringomyelia, and may cause sensory loss.<sup>1</sup> Charcot arthropathy is characterized by destruction of the related joint in patients with neurosensory loss.<sup>1,2</sup> The shoulder may be affected by

**Figure 2** Spine MRI



(A) Sagittal T2-weighted spine MRI shows tonsillar herniation (curved arrow) and cervical syringomyelia (straight arrows). (B) Axial T2-weighted spine MRI discloses lateral syringomyelia (left side), the same side of the Charcot shoulder. (C) Sagittal T1-weighted spine MRI shows the Chiari malformation with tonsillar herniation (curved arrow) and syringomyelia.

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syringomyelia-induced neuropathy, causing Charcot shoulder.<sup>2</sup>

#### AUTHOR CONTRIBUTIONS

Dr. Bocca: case report conception, case report organization, case report execution, writing of the first draft, manuscript review and critique. Dr. Tonholo Silva: case report conception, case report organization, case report execution, writing of the first draft, manuscript review and critique. Dr. Eijnisman: case report conception, case report organization, case report execution, manuscript review and critique. Dr. Pedroso: case report conception, case report organization, case report execution, manuscript review and critique. Dr. Barsottini: case report conception, case report organization, case report execution, manuscript review and critique.

#### STUDY FUNDING

No targeted funding reported.

#### DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org](http://Neurology.org) for full disclosures.

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*Neurology* 2017;89:e38-e39

DOI 10.1212/WNL.0000000000004154

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